

AMENDMENTS TO THE CLAIMS

1. (Previously Amended) An interocclusal sports prophylaxis comprising a core, the core including an arch shaped occlusal plate, maxillary buccal and lingual walls extending upwardly from the occlusal plate, a dentition encasement material covering the upper surface of the occlusal plate and inner faces of the maxillary buccal and lingual walls, the occlusal plate including a generally planar lower mandibular face, the dentition encasement material covering selected zones of the mandibular face, the selected zones being spaced from one another along the mandibular face, the occlusal plate extending below the plane of the mandibular face at the selected zones, the core including passages through the occlusal plate transverse to the plane of the mandibular face at the selected zones, the dentition encasement material covering the upper surface of the occlusal plate and the selected zones extending through the passages, the dentition encasement material conforming to the shape of tooth surfaces after the prophylaxis is fitted and when the prophylaxis is worn, whereby mandibular occlusal surfaces not registered with the selected zones are spaced from the mandibular face to provide oral breathing passages between mandibular tooth surfaces and the mandibular face when the prophylaxis is worn.

2. (Cancelled)

3. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein the dentition encasement material is molded to the core.

4. (Cancelled)

5. (Previously Amended) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein the occlusal plate extends below the plane of the mandibular face a distance in the order of at least one mm at the selected zones.

6. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 5 wherein one of the selected zones is an incisor zone and the occlusal plate extends below the plane of the mandibular face a distance in the order of two mm at the incisor zone.

7. (Cancelled)

8. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein the core comprises a resin which includes a thermoplastic polyurethane elastomer.

9. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 8 wherein the thermoplastic polyurethane elastomer is blended with a thermoplastic selected from the group consisting of ethylene vinyl acetate copolymer and ethylene methyl acrylate copolymer.

10. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein the core comprises a resin having a Shore A hardness of at least 85 and a Vicat softening temperature of at least 65°C and the dentition encasement material comprises a resin having a Shore A hardness below 80 and a Vicat softening temperature of approximately 36°C.

11. (Previously Amended) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein the breathing passages comprise not less than 30 sq. mm.

12. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 1 wherein there are three selected zones, a pair of molar zones and one incisor zone and the minimum distance between the molar zones and the incisor zone is in the order of 1.5 cm.

13. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 8 wherein the resin comprises 90% by weight thermoplastic polyurethane elastomer and 10% by weight ethylene vinyl acetate copolymer.

14. (Previously Amended) An interocclusal sports prophylaxis as constructed in accordance with claim 8 wherein the resin comprises 90% by weight thermoplastic polyurethane elastomer and 10% by weight ethylene methyl acrylate copolymer.



15. (Previously Amended) An interocclusal sports prophylaxis comprising a core, the core including an arch shaped occlusal plate, maxillary buccal and lingual walls extending upwardly from the periphery of the occlusal plate, a dentition encasement material covering the upper surface of the occlusal plate and inner faces of the maxillary buccal and lingual walls, the occlusal plate including a generally planar lower mandibular face, the core including a labial force dispersal shield extending downwardly from a peripheral portion of the occlusal plate to protect a user's incisor mandibular structure against frontal blows during sporting activities, the mandibular face having a pair of molar zones in registration with mandibular molar teeth of the user, the core further including a pair of opposed peripheral framing braces, each framing brace extending downwardly from a buccal periphery of the mandibular face at the molar zones to protect the user's mandibular structure against lateral blows encountered during sporting activities, the buccal periphery of the mandibular face being free of downward extensions intermediate the labial force dispersal shield and the framing braces to facilitate oral breathing.

16. (Original) An interocclusal sports prophylaxis as constructed in accordance with claim 15 wherein the dentition encasement material covers the molar zones and an incisor zone of the mandibular face, the incisor zone being registered with the labial force dispersal shield.

17. (Currently Amended) An interocclusal sports prophylaxis as constructed in accordance with claim 15 wherein the mandibular face further includes an incisor zone, the incisor zone and the molar zones extending below ~~a~~ the plane of the mandibular face, whereby mandibular occlusal surfaces of a user not registered with the incisor zone and the molar zones are spaced from the mandibular face to provide a opposed oral breathing passages when the prophylaxis is worn.

18. (Previously Withdrawn and Previously Amended) A method of fabricating an interocclusal sports prophylaxis, the method including the steps of:

- a) providing a first thermoplastic resin,
- b) molding from the first thermoplastic resin, a core having an arch shaped occlusal plate with a buccal periphery, a lingual periphery and maxillary buccal and lingual walls extending upwardly from the buccal and lingual peripheries of the plate, the buccal and lingual walls being dimensioned for substantial registration with a user's maxillary dentition, a labial force dispersal shield extending downwardly from the buccal periphery of the plate at an incisor zone and a pair of spaced opposed molar framing braces extending downwardly from buccal and lingual peripheries of the plate at left and right molar zones of the plate, the force dispersal shield and the molar framing braces being dimensioned to overlie the user's incisor and molar teeth respectively, the periphery of the plate being free of downward extensions intermediate the labial force dispersal shield and the framing braces,
- c) providing a dentition encasement material from a second thermoplastic resin having a Vicat softening temperature and a hardness lower than that of the first thermoplastic resin, and
- d) molding the dentition encasement material over selected areas of the core.

19. (Previously Withdrawn) A method of providing an interocclusal sports prophylaxis in accordance with claim 18 wherein the first thermoplastic resin is provided by blending a thermoplastic polyurethane elastomer with a thermoplastic selected from the group consisting of ethylene vinyl acetate copolymer and ethylene methyl acetate copolymer.

20. (Previously Withdrawn) A method of providing an interocclusal sports prophylaxis in accordance with claim 18 wherein the second thermoplastic resin comprises an ethylene vinyl acetate copolymer.

21. (Previously Added) A method of providing an interocclusal sports prophylaxis in accordance with claim 18 wherein step d) is performed by molding the dentition encasement material over maxillary surfaces of the occlusal plate.

22. (Previously Added) A method of providing an interocclusal sports prophylaxis in accordance with claim 21 wherein step d) is performed by molding the dentition encasement material over mandibular surfaces of the occlusal plate at the incisor zone and at the molar zones.

23. (Previously Added) A method of providing an interocclusal sports prophylaxis in accordance with claim 22 wherein the occlusal plate includes passages extending between maxillary surfaces and mandibular surfaces at the incisor zone and at the molar zones and step d) is performed by molding the dentition encasement material into the passages to unite the dentition encasement material molded over the maxillary surfaces of the occlusal plate with the dentition encasement material molded over the mandibular surfaces of the occlusal plate.